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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,747	02/08/2002	Ryo Yamada	Y1600.0001/P001	9293

7590 01/18/2006

DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
1177 Avenue of the Americas
New York, NY 10036-2714

EXAMINER

LI, SHI K

ART UNIT PAPER NUMBER

2633

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,747

Applicant(s)

YAMADA, RYO

Examiner

Shi K. Li

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14 and 16-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-12, 14 and 16-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 09 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by

Baworntummarat et al. (C. Baworntummarat et al., "On the Comparison of Optical WDM Mesh Network Protection Strategies", MIL COM 2000, 22-25 Oct 2000).

Regarding claims 1 and 9, Baworntummarat et al. teaches protection scheme for a WDM mesh network (e.g., FIG. 1 or FIG. 4). Each network comprises a plurality of nodes each of which has crossconnect (see first paragraph of "Introduction"). Baworntummarat et al. teaches on page 887, left col., fourth paragraph disjoint path protection wherein two physically disjoint paths are chosen for a connect request such that one of the path is selected as active (working) while the other path is considered as a backup. Baworntummarat et al. teaches on page 887, right col., first paragraph to use node disjoint paths as working/standby pair. Two node-disjoint paths between a pair of nodes (source and destination) form a ring. It is understood that when a failure occurs, traffic is switched from working path to standby path.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-7, 10-12, 14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baworntummarat et al. (C. Baworntummarat et al., "On the Comparison of Optical WDM Mesh Network Protection Strategies", MIL COM 2000, 22-25 Oct 2000) in view of Lu (U.S. Patent 5,815,490).

Baworntummarat et al. has been discussed above in regard to claims 1 and 9. Regarding claims 2 and 16, the difference between Baworntummarat et al. and the claimed invention is that Baworntummarat et al. does not teach a ring map. Lu teaches in FIGS. 4A-4E and FIG. 6a portion of a ring table comprising link information, node ID and ring ID. One of ordinary skill in the art would have been motivated to combine the teaching of Lu with the ring configuration method of Baworntummarat et al. to maintain a ring table because a ring table keeps track of provisioning information that is necessary for performing protection switch. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to maintain a ring table, as taught by Lu, in the ring configuration method of Baworntummarat et al. because a ring table keeps track of provisioning information that is necessary for performing protection switch.

Regarding claims 3 and 17, Lu teaches in col. 8, lines 22-46 WDM-based optical network.

Regarding claims 4-5, 10-12 and 18-19, Lu teaches in FIG. 4A that a ring has a ring ID and teaches in FIG. 4D that a node has node ID. In a situation where a node belongs to a plurality of rings, it is obvious to use the ring ID together with the node ID to identify a node.

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That is, if a node belongs to the same ring, it has the same ring ID/node ID combination. For two different rings, a node common to the two rings has different ring ID/node ID combinations.

Regarding claim 6, Baworntummarat et al. teaches on page 887, left col., fourth paragraph that restoration paths can be shared among active paths.

Regarding claims 7 and 20, Lu teaches in FIG. 1B a subnetwork controller SNC for ring management.

Regarding claim 14, Lu teaches in col. 8, lines 22-46 WDM-based optical network.

5. Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baworntummarat et al. (C. Baworntummarat et al., "On the Comparison of Optical WDM Mesh Network Protection Strategies", MIL COM 2000, 22-25 Oct 2000) in view of Lu (U.S. Patent 5,815,490) in view of Ramamurthy et al. (R. Ramamurthy et al., "Capacity Performance of Dynamic Provisioning in Optical Networks", Journal of Lightwave Technology, Vol. 19, No. 1, January 2001).

Baworntummarat et al. has been discussed above in regard to claims 1 and 9. The difference between Baworntummarat et al. and the claimed invention is that Baworntummarat et al. does not teach a distributed manner for generating network map and setting up paths.

Ramamurthy et al. teaches in p. 42, Section C to use distributed routing protocol such as OSPF and its extension to collect network information. One of ordinary skill in the art would have been motivated to combine the teaching of Ramamurthy et al. with the ring configuration method of Baworntummarat et al. because a distributed network management system scales well as the size of the network increases and has high reliability. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use distributed routing protocol for

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generating network map and setting up paths, as taught by Ramamurthy et al., in the ring configuration method of Baworntummarat et al. because a distributed network management system scales well as the size of the network increases and has high reliability.

Response to Arguments

6. Applicant's arguments with respect to claims 1-12, 14 and 16-21 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

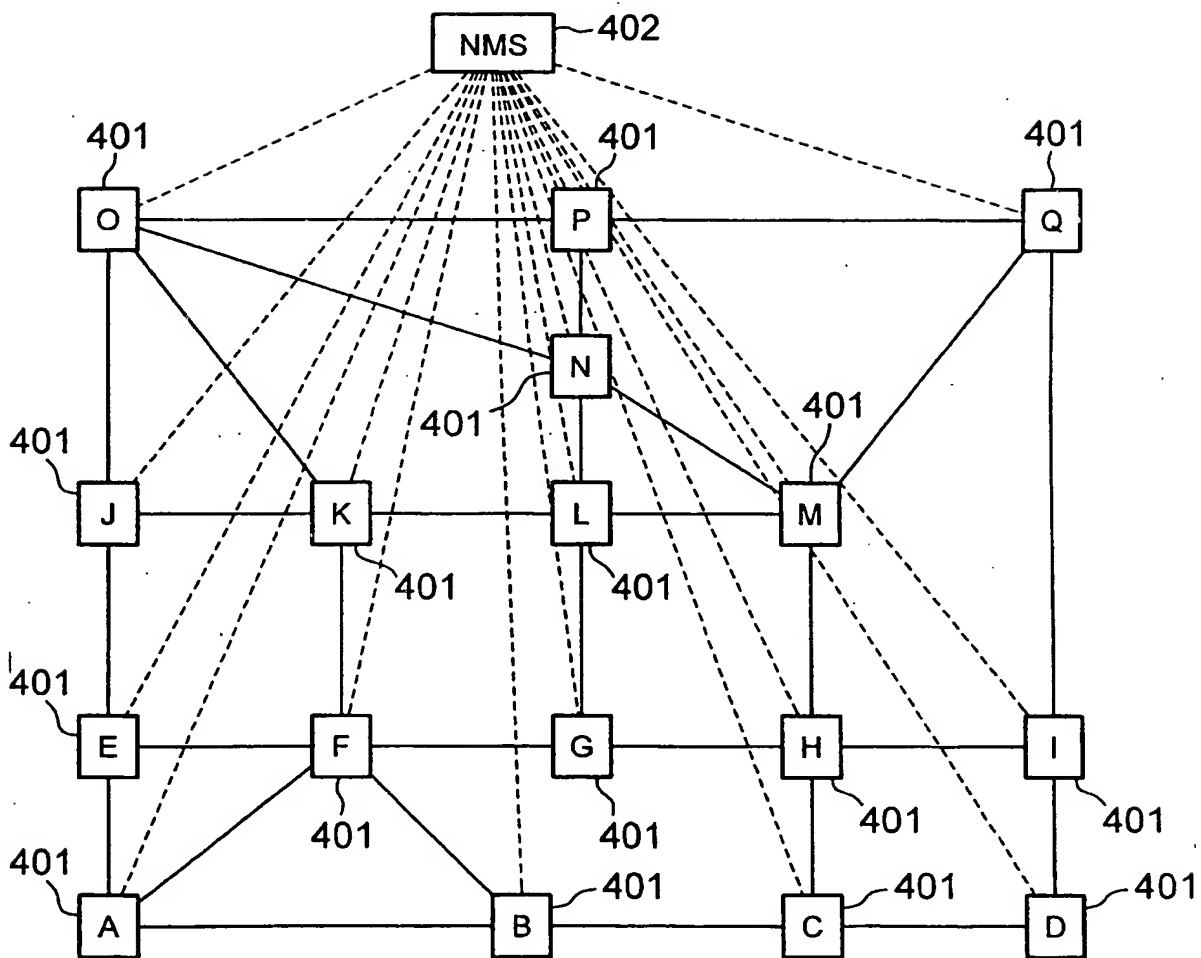
skl
10 January 2006


Shi K. Li
Patent Examiner



Mr 1/9/06

FIG. 1

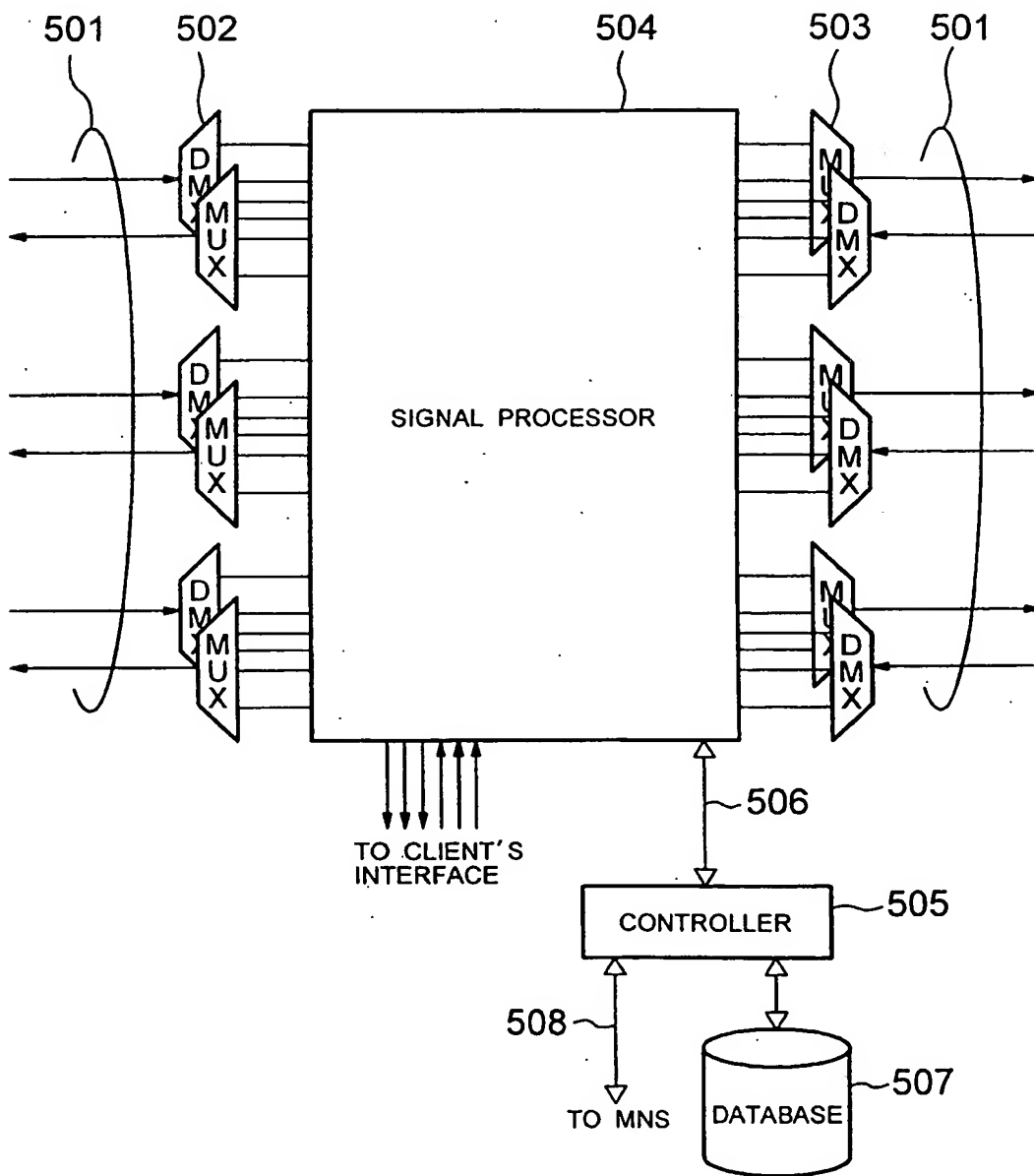




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FIG. 2





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FIG. 3A

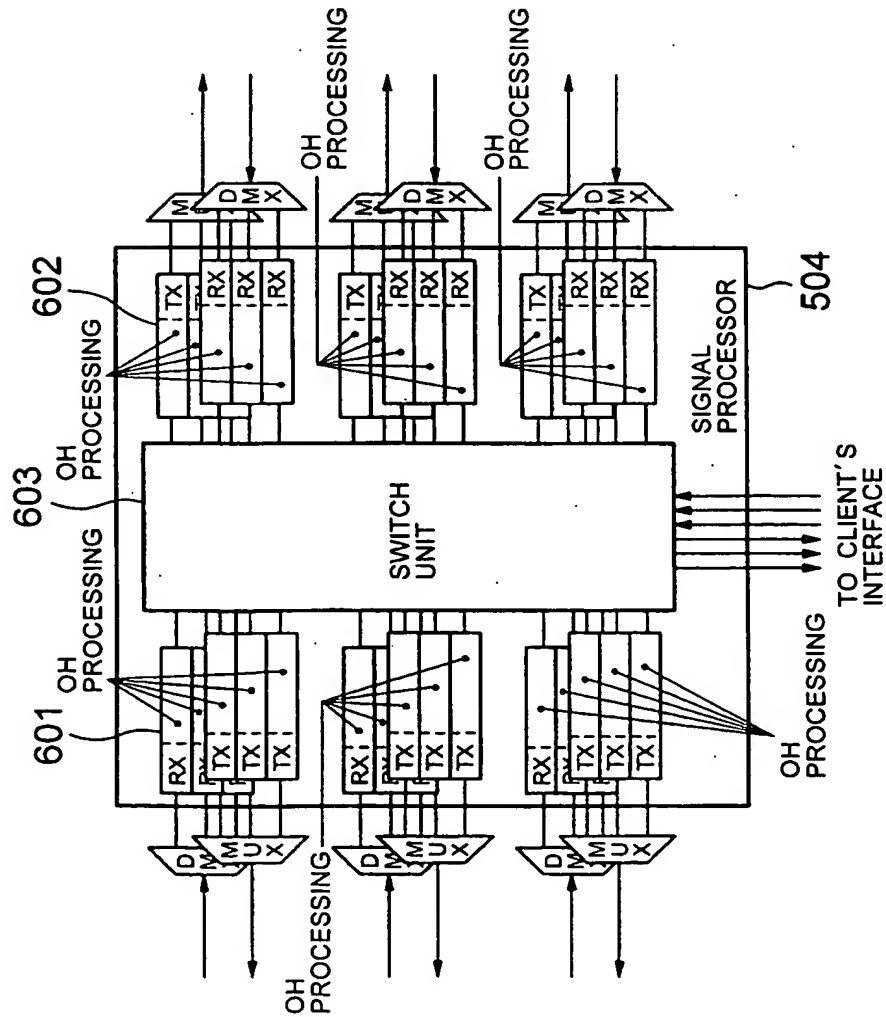
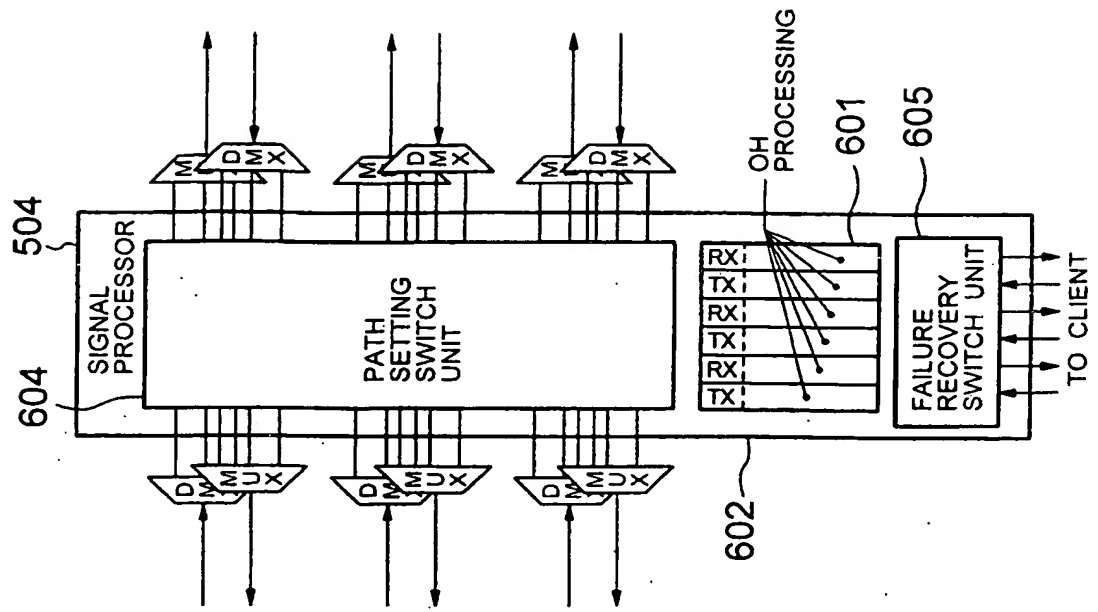


FIG. 3B



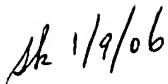
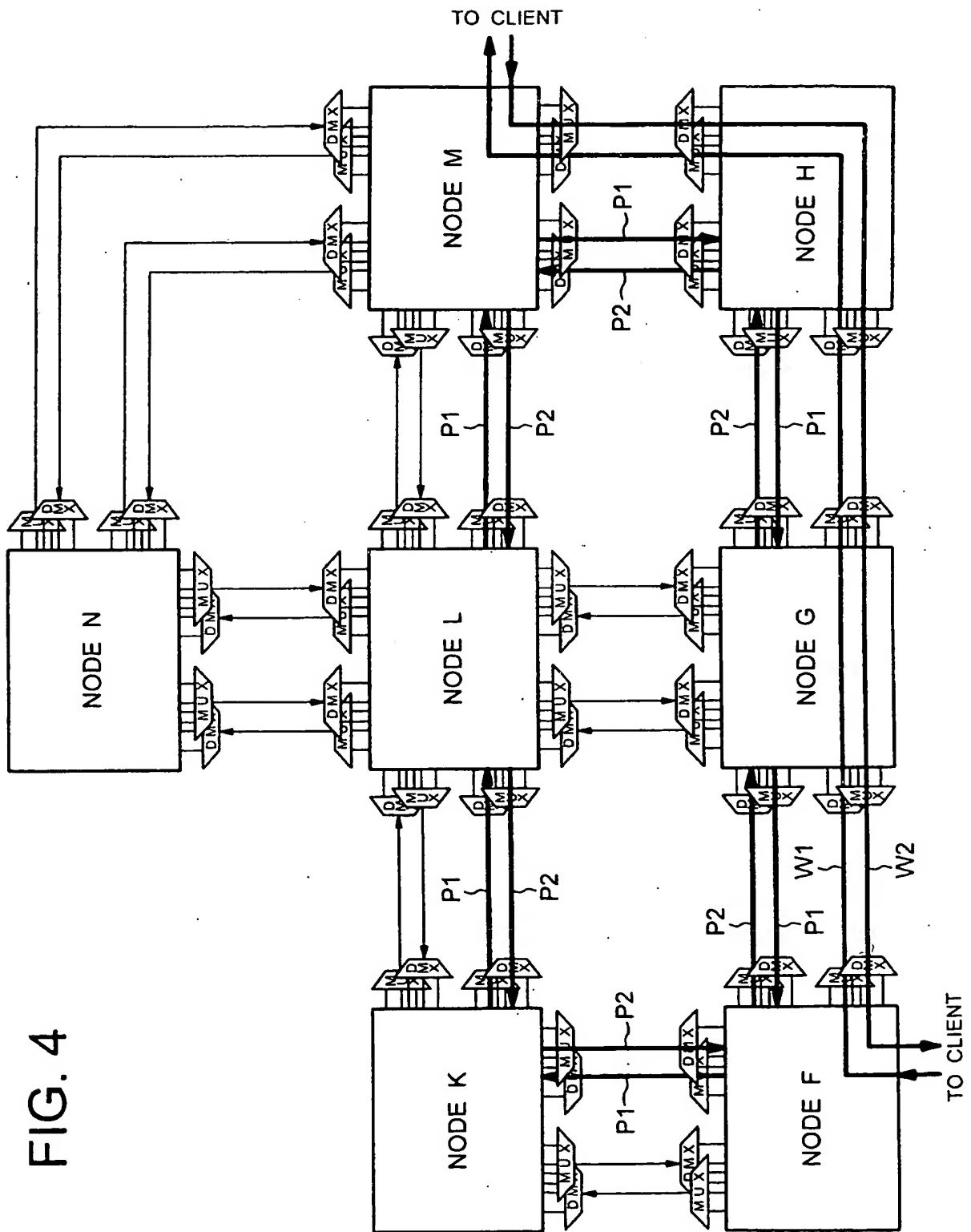
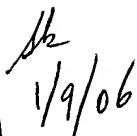


FIG. 4





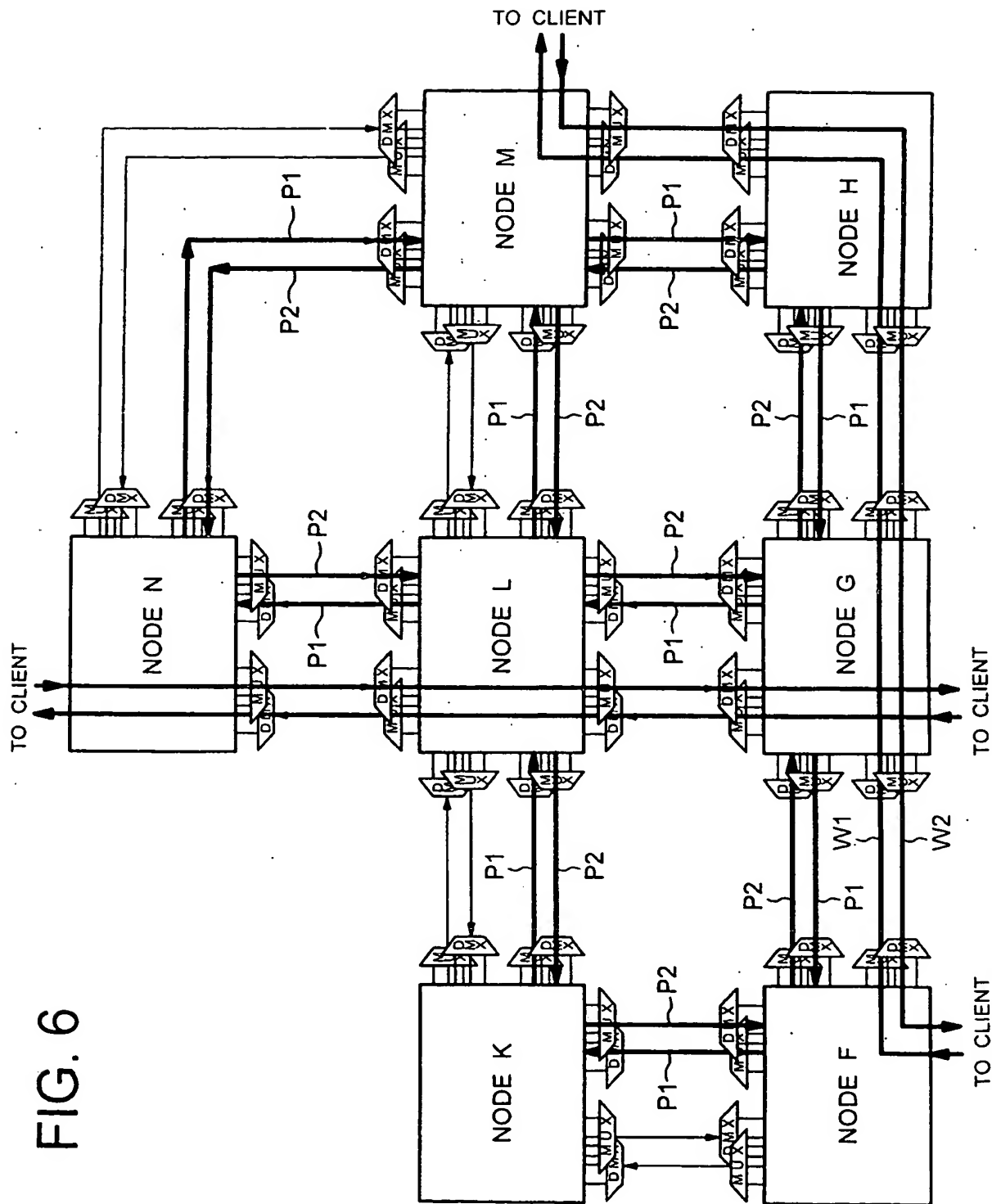
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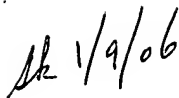
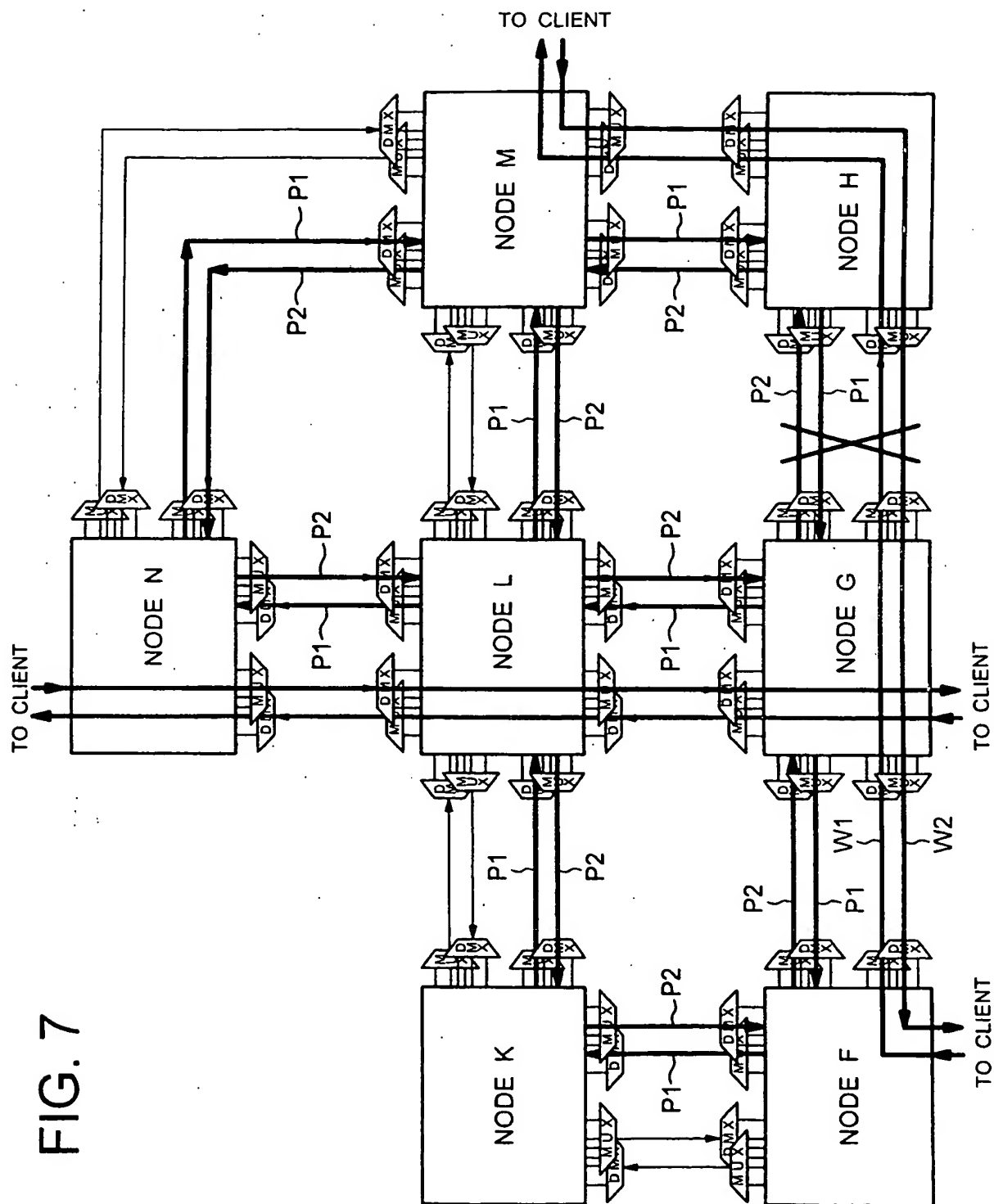


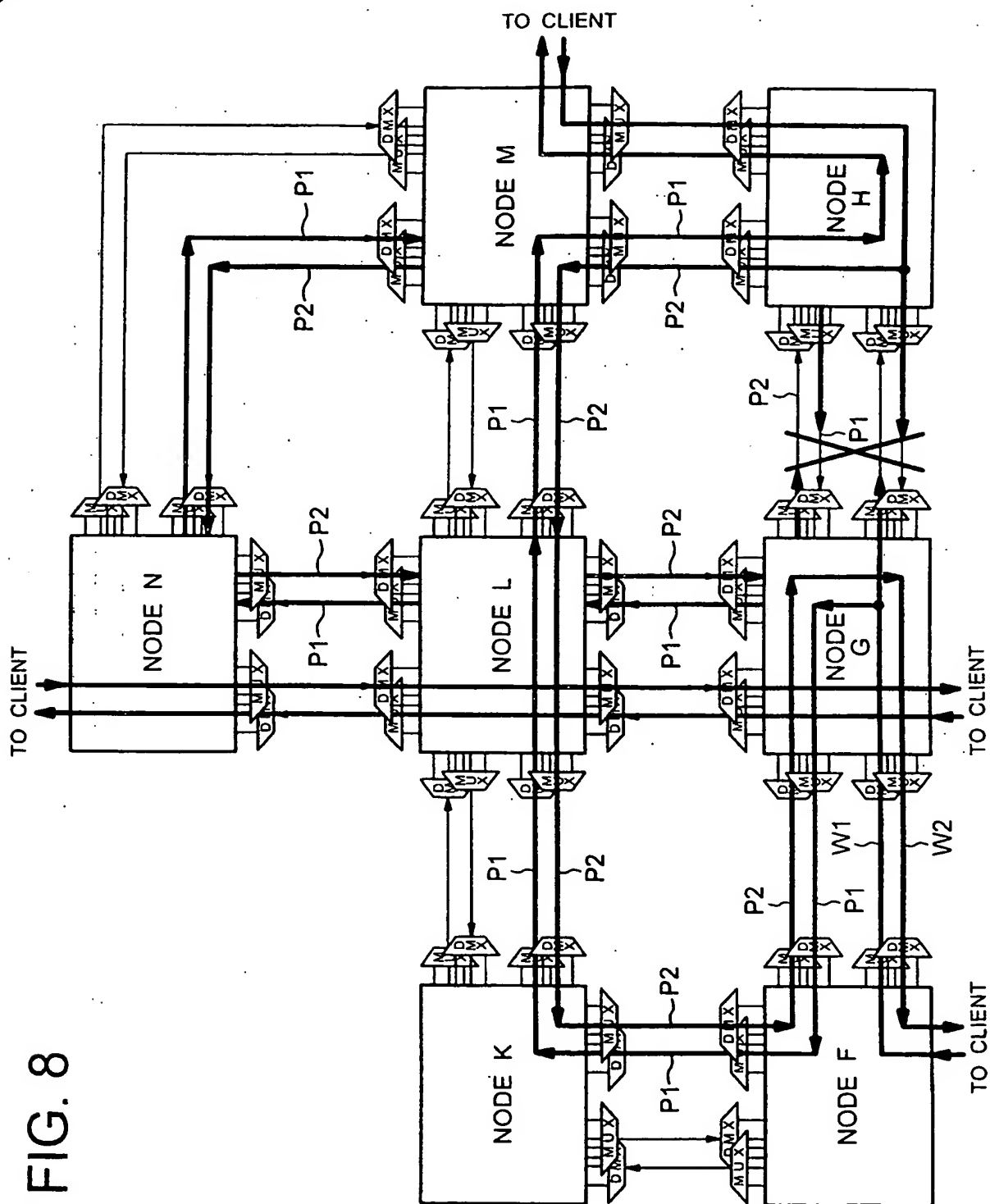
FIG. 7





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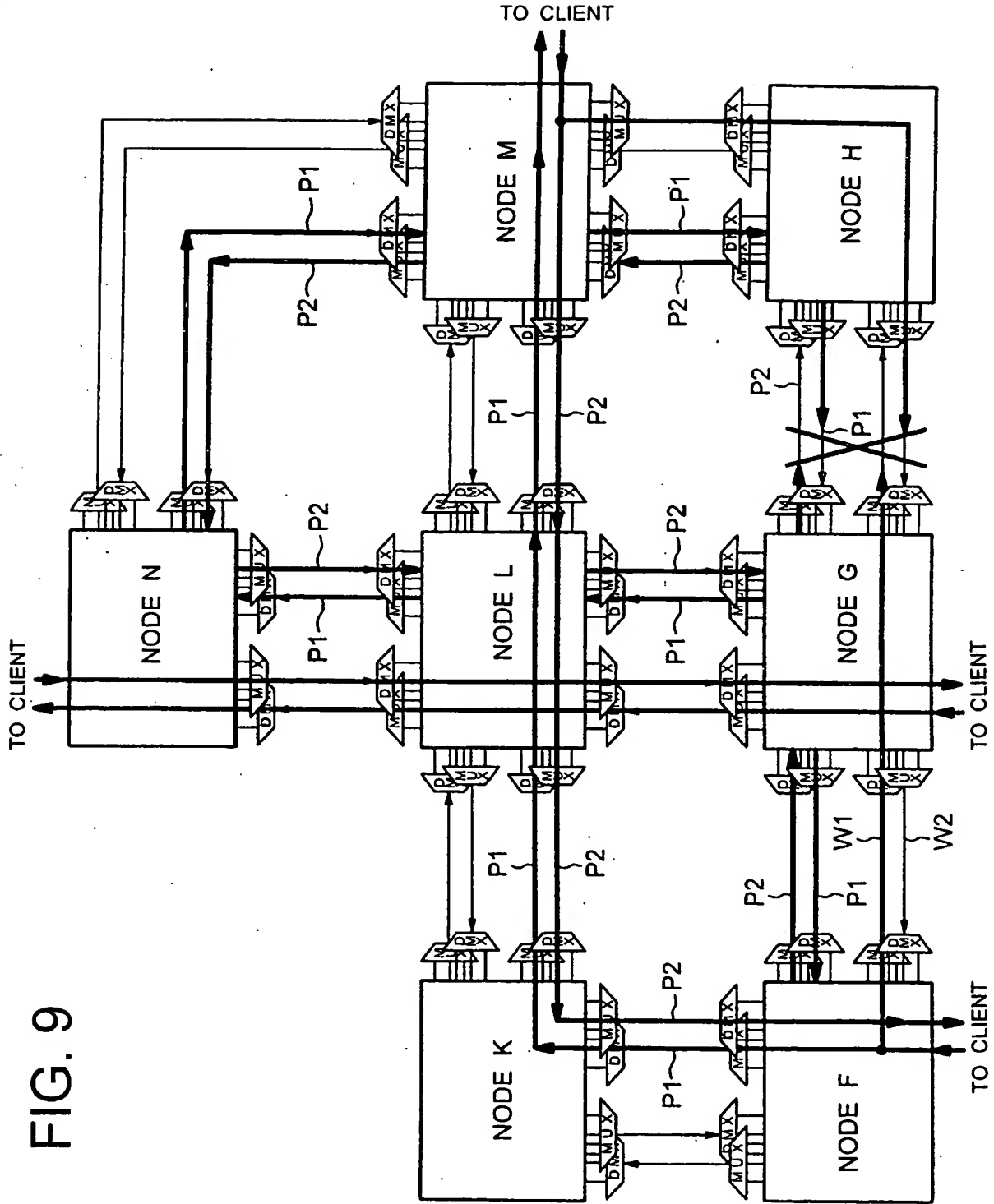
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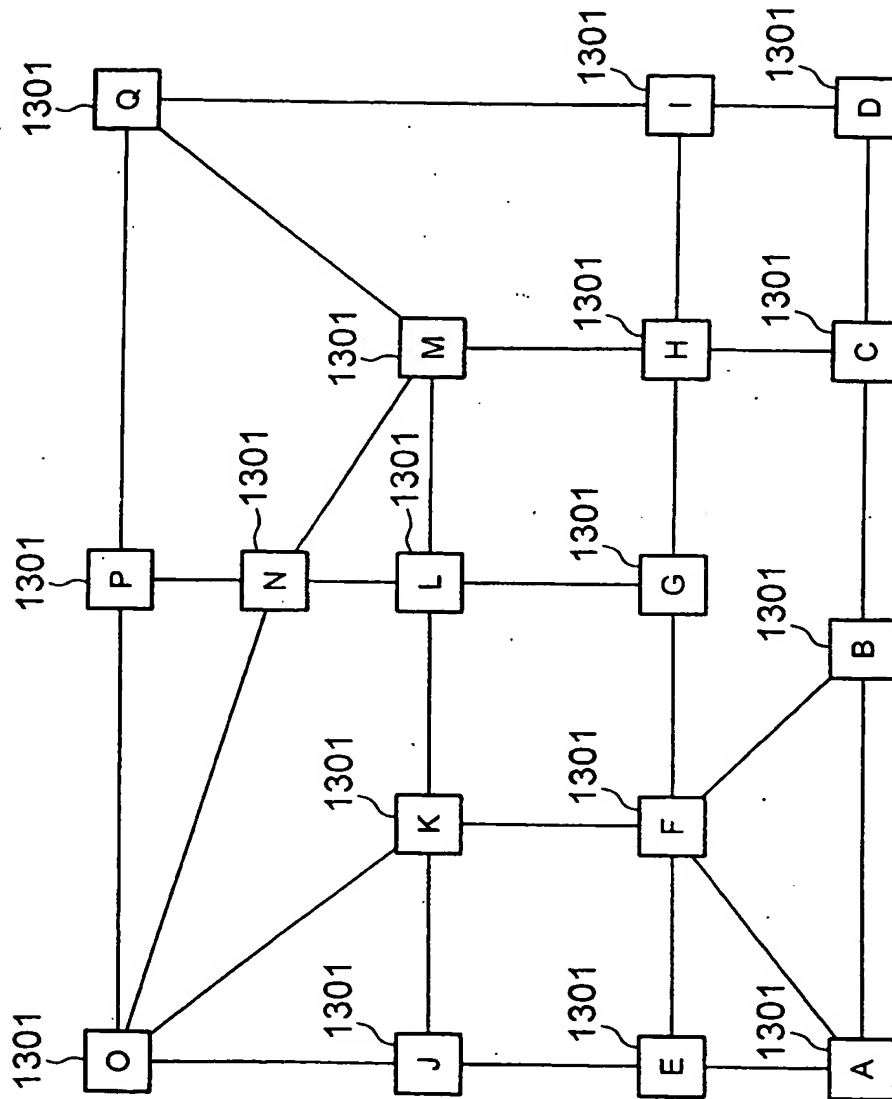




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FIG. 10

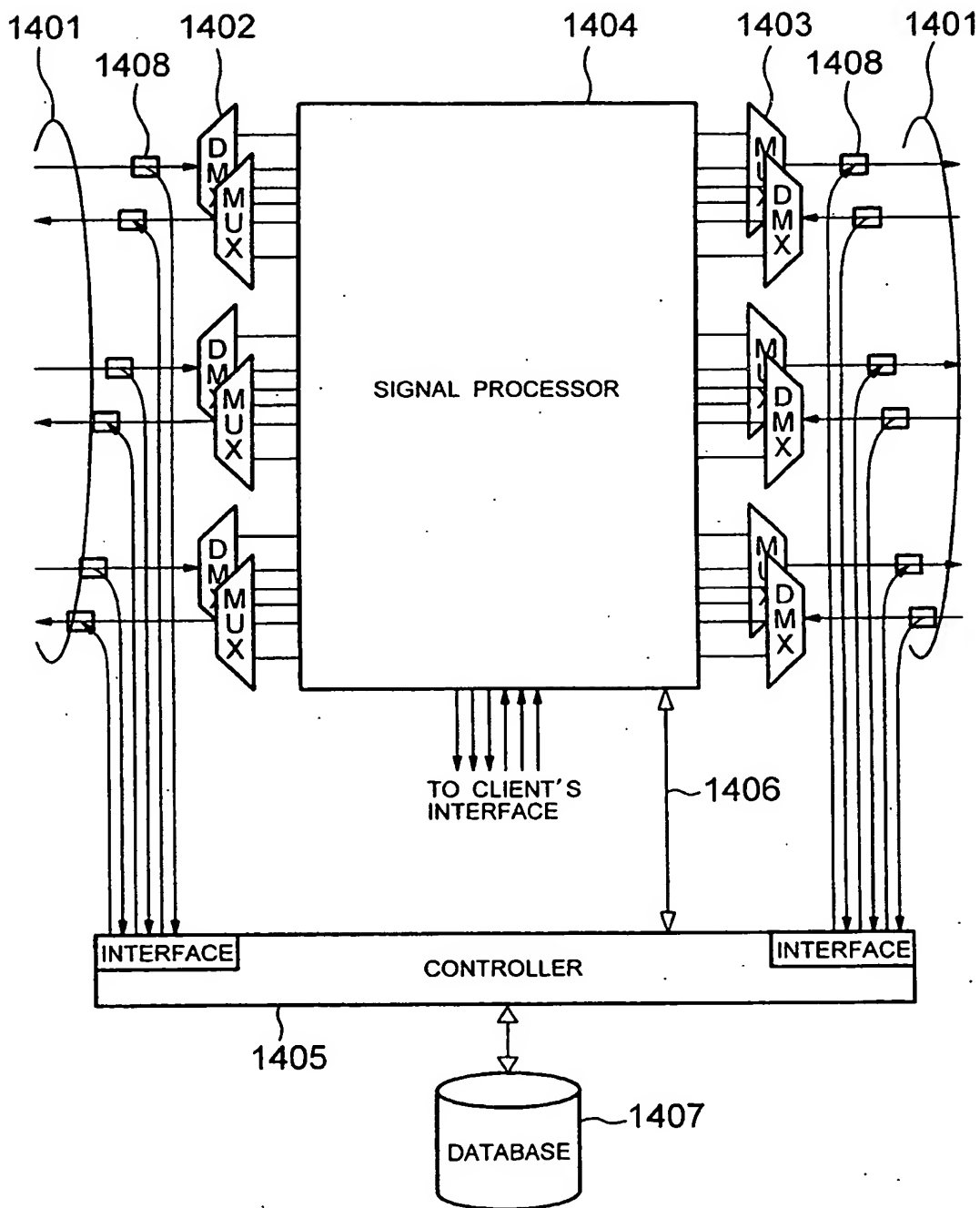




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FIG. 11





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FIG. 12

RING ID	RING LINK INFORMATION	W1		W2		P1		P2		LOCAL NODE ID
		INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	
1	F		29	26		32	41	38	35	0
	G	8	29	26	11	32	5	2	35	1
	H	8	41	38	11	44	5	2	47	2
	M	20			23	8	17	14	11	3
	L					8	29	26	11	4
	K					20	29	26	23	5



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FIG. 13

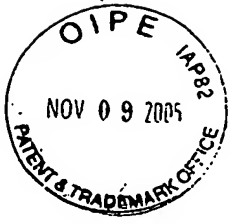
RING ID	RING LINK INFORMATION	W1		W2		P1		P2		LOCAL NODE ID
		INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	
1	F		29	26		32	41	38	35	0
	G	8	29	26	11	32	5	2	35	1
	H	8	41	38	11	44	5	2	47	2
	M	20			23	8	17	14	11	3
	L					8	29	26	11	4
2	K					20	29	26	23	5
	F					32	41	38	35	0
	G					32	5	2	35	1
	H					44	5	2	47	2
	M		5	2		8	17	14	11	3
	L	32	5	2	35	8	29	26	11	4
	K	32			35	20	29	26	23	5



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FIG. 14

RING ID	RING LINK INFORMATION	W1		W2		P1		P2		LOCAL NODE ID
		INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	
1	F		29	26		32	41	38	35	0
	G	8	29	26	11	32	5	2	35	1
	H	8	41	38	11	44	5	2	47	2
	M	20	5	2	23	8	17	14	11	3
	L	32	5	2	35	8	29	26	11	4
	K	32			35	20	29	26	23	5
	G	44			47	32	41	38	35	6
2	H					32	5	2	47	7
	M					44	17	14	47	8
	N		17	14		20	29	26	23	9
	L	44	17	14	47	20	41	38	23	10



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FIG. 15

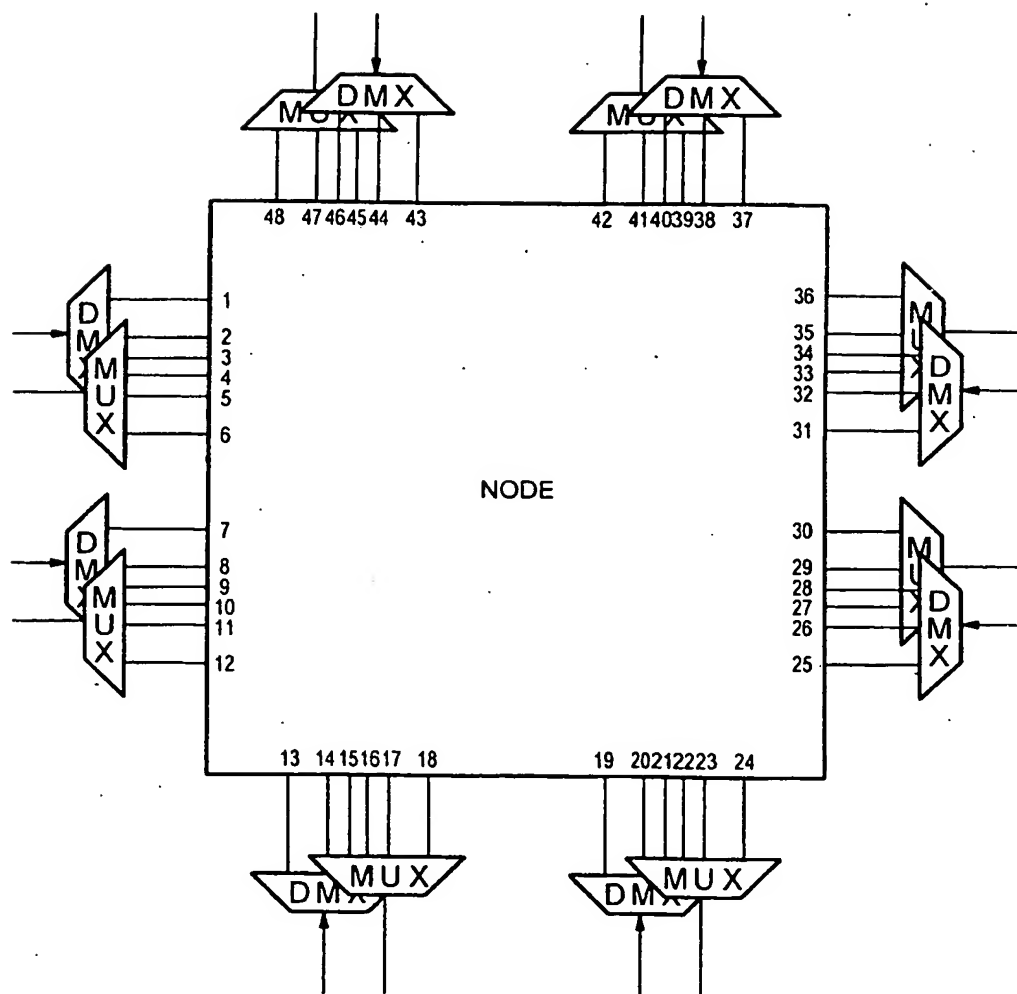
RING ID	RING LINK INFORMATION	W1		W2		P1		P2		LOCAL NODE ID
		INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	INPUT PORT	OUTPUT PORT	
1	F		29	26		32	41	38	35	0
	G	8	29	26	11	32	5	2	35	1
	H	8	41	38	11	44	5	2	47	2
	M	20	5	2	23	8	17	14	11	3
	L	32	5	2	35	8	29	26	11	4
	K	32			35	20	29	26	23	5
2	N					44	5	2	47	0
	O	32			35	20	29	26	23	1
	P		5	2		8	17	14	11	2



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FIG. 16





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FIG. 17C

PRIOR ART

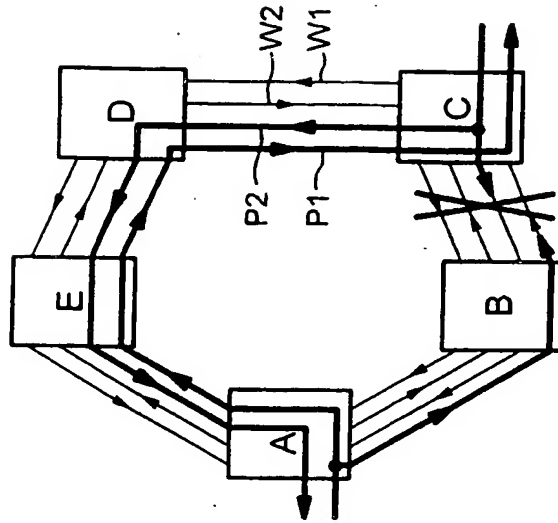


FIG. 17B

PRIOR ART

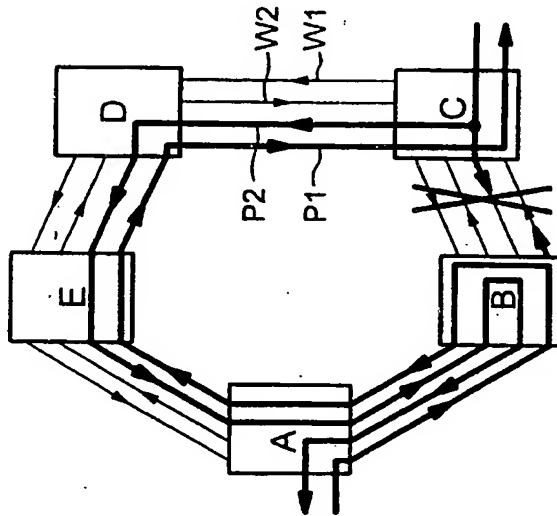
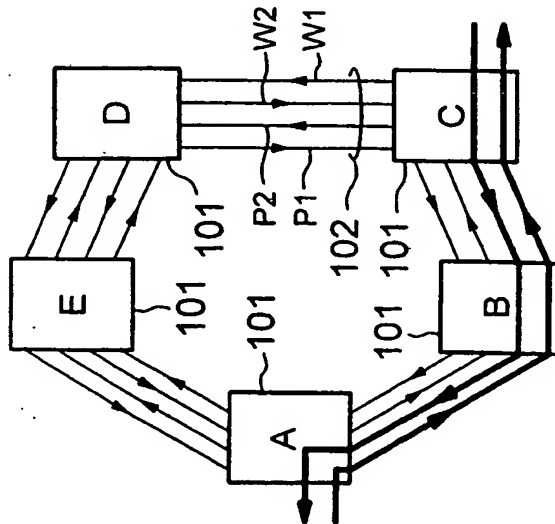


FIG. 17A

PRIOR ART

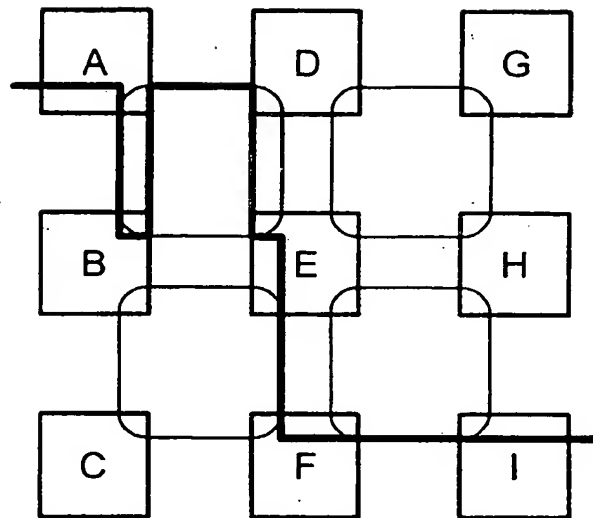




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FIG. 18

PRIOR ART





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FIG. 19

PRIOR ART

